Callerton Academy

Maths Curriculum Overview

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Algebra: Sequences; Algebraic notation; Equality and equivalence	Number/Ratio: Place Value; Ordering integers; Ordering decimals; FDP equivalence	Number: Addition and subtraction problem solving; multiplication and division problem solving; fractions and percentages of amounts.	Number: Direction and operations with negatives; Addition and subtraction of fractions.	Geometry and measures: Construction, measuring and using geometric notation; developing geometric reason	Number: Developing number sense; sets and probability; prime numbers and proof.
8	Ratio, proportion and rates of change: Ratio and scale; multiplicative change; multiplying and dividing fractions.	Visual Representations contains Algebra/Statistics/Probability: Working in the Cartesian plane; representing data; tables and probability.	Algebra: Brackets, equations and inequalities; sequences; indices.	Number: Fractions and percentages; standard index form; number sense.	Geometry and measures: Angles in parallel lines; angles in polygons; area of trapezia; area of circles; line symmetry and reflection.	Statistics: Data handling cycle; measures of location.
9	Algebra: straight-line graphs; forming and solving equations; testing and conjectures.	Geometry and measures: 3D shapes; constructions and congruence.	Number: Numbers; Using percentages; money.	Geometry and measures: Deduction; rotation and translation; Pythagoras' theorem.	Ratio, proportion and rates of change: Enlargement and similarity; solving ratio and proportion problems; rates.	Probability: algebraic representations; KS3 revision of selected topics.
10	Geometry and measures: Congruence, similarity and enlargement; trigonometry	Algebra: Representing solutions of equations and inequalities; simultaneous equations	Geometry and measures; angles and bearings; working with circles; vectors	Ratio, proportion and rates of change: ratios and fractions; percentages and interest; probability	Statistics and number: collecting, representing and interpreting data; non-calculator methods	Number and algebra: Types of number and sequences; indices and roots; manipulating expressions

11	Algebra: gradients and lines; non-linear graphs; using graphs	Algebra: expanding and factorising; changing the subject; functions	Ratio, Geometry and Algebra: Multiplicative reasoning; Geometric reasoning; algebraic reasoning	Geometry and measures; Transforming and constructing; exam technique	Revision	Revision and examinations

Key examples of building on prior knowledge:

Sequences

Y7 Autumn 1
Sequences including term-to-term rule
Y8 Spring 1
Sequences including position to term rule i.e. nth term (prior knowledge includes algebraic notation from Y7 Autumn 1)
Y10 Summer 2
Sequences including problem solving with Fibonacci and geometric sequences (prior knowledge involves solving equations from Y7 Autumn 1, Y8 Spring 1 and Y9 Autumn 1)

Graphs

Y8 Autumn 2
Cartesian Plane
Y9 Autumn 1
Straight line graphs
Y10 Autumn 2
Representation of solutions graphically including simultaneous equations
Y11 Autumn 1
Non-linear graphs and using graphs

Solving Equations
Y7 Autumn 1
Equality and Equivalence
Y8 Spring 1
Brackets, Equations and Inequalities
Y9 Autumn 1
Forming and Solving equations
Y10 Autumn 2
Simultaneous equations

Fractions
Y7 Autumn 2
FDP equivalence
Y7 Spring 1
Fractions and percentages of amounts
Y7 Spring
Additions subtraction of fractions
Y8 Autumn 1
Multiplying and Dividing fractions
Y8 Spring 2
Fractions and percentages
Y10 Spring 2
Fractions and ratios

Shape (e.g. area, surface area and volume)
Y7 Spring 1
Multiplication and division problem solving (includes area of squares, rectangles and triangles)
Y7 Summer 1
Geometric notation
Y8 Summer 1

Area of trapezia, Area of circles
Y9 Autumn 2
3 Dimensional shapes (surface area and volume)
Y9 Spring 2
Pythagoras Theorem (including using Pythagoras to find perpendicular height of a triangle and therefore find the area)
Y 10 Autumn 1
Trigonometry (includes finding perpendicular height to find area with right angled trig and higher only, use of 1/2abSinC for area of non-right angled triangles)

Algebraic manipulation
Y7 Autumn 1
Algebraic notation including bar modelling, fact families and collecting like terms,
Y8 Spring 1
Brackets, equations and inequalities
Y9 Autumn 1
Expanding a pair of binomials
Y9 Autumn 1
Testing conjectures (e.g. 2n as definition of even, 2n + 1 as odd)
Y10 Summer 2
Algebraic fractions
Y11 Autumn 2
Expanding and factorising